

**Opportunity Title:** ORNL Innovation Crossroads Grid Fruit Control Engineer  
Laboratory Technology Associate  
**Opportunity Reference Code:** ORNL20-LabTech-EESD

**Organization** Oak Ridge National Laboratory (ORNL)

**Reference Code** ORNL20-LabTech-EESD

**Description** Oak Ridge National Laboratory (ORNL) is the largest U.S. Department of Energy (DOE) science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy, environment, and security.

The candidate will work closely with Grid Fruit, a company within the Innovation Crossroads Program at ORNL, to develop controls software and hardware for operating commercial refrigeration systems more efficiently. The candidate will test the software and hardware solutions on commercial refrigeration units, which will include designing and conducting these tests, as well as collecting and analyzing results.

The candidate will also evaluate maintenance and operation issues in commercial refrigeration units. The candidate will develop software that measures performance in terms of temperature, peak power, and energy. This project will be conducted at ORNL, directed by Grid Fruit, a data and controls start-up company, as part of the DOE-sponsored Innovation Crossroads Program.

#### **Major Duties and Responsibilities:**

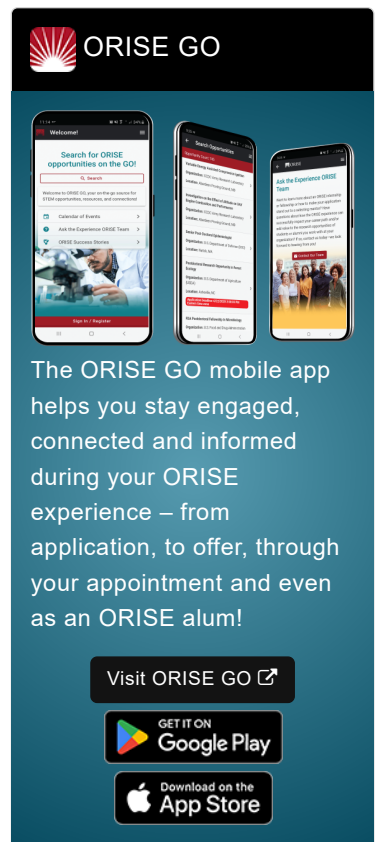
- Developing controls software to interface with commercial refrigeration controllers (e.g., from Danfoss and Emerson).
- Developing controls hardware (to working prototype/test level) as needed to retrofit existing commercial refrigeration units.
- Designing and conducting control tests, then analyzing results to evaluate changes in commercial refrigeration performance (e.g., temperature, peak demand, and energy).
- Meeting regularly with the Grid Fruit team and preparing deliverables for them by specified deadlines.

**Qualifications** Candidates should currently be pursuing or recently have completed a bachelor's degree in engineering, computer science, mathematics, or a related field.

#### **Preferred Skills:**

- Experience developing control systems and controls software.
- Experience in conducting tests, collecting data, and analyzing results (e.g., using statistical methods).
- Prior experience using Modelica is a plus but not required.

**Living in East Tennessee:** While the opportunity to work at ORNL is an amazing experience in itself, it's easy to overlook everything else East Tennessee has to offer if you haven't had the opportunity to spend time here. From spending your weekends downtown at Knoxville's farmers



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market, the Rhythm n' Blooms Music Festival, or the Dogwood Arts Festival, to some of the best hiking, kayaking, and camping in the U.S., East Tennessee has something to offer everyone.

The ORNL Laboratory Technology Associate Program is administered by Oak Ridge Associated Universities through its contract with DOE to manage the Oak Ridge Institute for Science and Education (ORISE).

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree received within the last 36 months or currently pursuing.
  - **Discipline(s):**
    - **Computer, Information, and Data Sciences** ([16](#))
    - **Engineering** ([4](#))
    - **Mathematics and Statistics** ([10](#))
  - **Age:** Must be 18 years of age

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